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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

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In the Matter of)

Guidelines for Evaluating)
the Environmental Effects of)
Radiofrequency Radiation)

ET Docket No. 93 -62

**FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY**

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**SUPPLEMENT TO REPLY COMMENTS OF
THE NATIONAL ASSOCIATION OF BROADCASTERS**

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Executive Summary

As set forth in this Supplement to Reply Comments of the National Association of Broadcasters, a review of the public record in the instant rulemaking proceeding reveals nearly universal consensus among experts in government, academia and industry that the Commission should adopt the revised ANSI/IEEE standard -- in its entirety and exclusively. Moreover, and especially in light of the complexity and controversy surrounding the nature and extent of the biological effects of certain exposures to RF radiation, this unanimity among experts, from such a diverse universe of disciplines, is extraordinary and extraordinarily compelling.

Additionally, and in view of such widespread support from a majority of the mainstream scientific community, which includes nationally and internationally-recognized standard setting organizations, the Commission can be confident that the revised ANSI/IEEE standard is the most scientifically up-to-date guideline available. It is the only rational choice.

Unlike the hybrid NCRP-ANSI exposure guideline proposed by the staff of the United States Environmental Protection Agency ("EPA") -- an option disfavored by a majority of experts -- the ANSI/IEEE standard provides the Commission with a flexible, scientifically sound framework for protecting the public from RF radiation exposure on an on-going basis. The ANSI/IEEE standard can serve as an essential tool which the Commission can employ, consistent with its grant of supplemental authority under the National Environmental Policy Act ("NEPA"), 42 U.S.C. Sections 4321, 4335, to enhance RF exposure public health and safety protections.

The Commission is referred specifically to the April 21, 1994, reply comments of the IEEE-SCC28, which effectively rebut the objections of the EPA to FCC adoption of ANSI/IEEE C95.1-1992. The merits of the FCC selecting the revised ANSI/IEEE standard are supported, as well, by an appended paper prepared by Jules Cohen, P.E. This Cohen paper offers

several cogent and irrefutable arguments in favor of FCC adoption of ANSI/IEEE C95.1-1992.

Additional supporting documents include materials depicting U.S. Department of Defense selection and use of ANSI/IEEE C95.1-1992, as well as two papers, issued by the Electromagnetic Energy Association, which urge rejection of the concept of “prudent avoidance” by those charged with adoption and implementation of rational policies for restricting human exposure to electromagnetic energy.

Were the Commission, instead, to reject the overwhelming majority of the comments in this proceeding and focus solely on brief comments of the staff of the U.S. Environmental Protection Agency – an agency which largely has discontinued its RF radiation regulatory and research program – we would have the classic case of the government listening only to the government. We believe the proper course, rather, is for the FCC to base its decision on the entire record of this proceeding.

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THE NATIONAL ASSOCIATION OF BROADCASTERS**

The National Association of Broadcasters ("NAB")¹ submits herewith a supplement to its reply comments filed in response to the public record established to date regarding the above-captioned Notice of Proposed Rule Making ("Notice").² The record illustrates widespread consensus among government, industry and academia that the Commission should adopt the ANSI/IEEE C95.1-1992 standard³ in its entirety, and exclusively.

¹ NAB is a nonprofit, incorporated association of radio and television stations and networks which serves and represents the American broadcast industry.

² Notice of Proposed Rule Making ("Notice") in ET Docket No. 93-62, 8 FCC Rcd 2849 (1993).

³ "ANSI/IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz" ANSI/IEEE C95.1-1992.

NAB is submitting this supplement due to the apparent imminence of the Commission's anticipated decision regarding its proposed revision of guidelines for evaluating the environmental effects of human exposure to "nonionizing electromagnetic energy," or "RF radiation." This action would be taken consistent with the FCC's mandate under the National Environmental Policy Act of 1969⁴ and within the timetable required under the Telecommunications Competition and Deregulation Act of 1996.⁵

I. SUMMARY.

Review of the public record reveals almost universal consensus among experts in government, academia and industry that the Commission should adopt the revised ANSI/IEEE standard in its entirety and exclusively. Indeed, and in light of the complexity and controversy surrounding the nature and extent of the biological effects of certain forms of RF radiation, such unanimity among experts, from such a diverse universe of disciplines, is exceptional.

Moreover, given such widespread support from a majority of the mainstream scientific community (which includes nationally and internationally recognized standard setting organizations such as the European Committee for Electro-technical Standardization ("CENELEC") and the North Atlantic Treaty Organization ("NATO") the

⁴ The National Environmental Policy Act ("NEPA"), 42 U.S.C. Sections 4321, 4335.

⁵ Public Law 104-104, 110 Stat. 56 (1996). The Act requires the Commission to take action in the instant proceeding within 180 days of the Act's February 8, 1996, effective date.

Commission can be confident that the revised ANSI/IEEE standard is the most scientifically up-to-date guideline available.⁶

Unlike the hybrid NCRP-ANSI exposure guideline proposed by the staff of the United States Environmental Protection Agency (“EPA”),⁷ an option disfavored by a majority of experts, the ANSI/IEEE standard provides the Commission with a flexible, scientifically sound framework for protecting the public from RF radiation exposure on an on-going basis. The ANSI/IEEE standard can be adapted to incorporate future findings regarding RF exposure as they become available, without diminishing the efficacy of the guideline. In addition, the ANSI/IEEE standard can serve as an essential tool which the Commission can employ, consistent with its grant of supplemental authority under the National Environmental Policy Act (“NEPA”), 42 U.S.C. Sections 4321, 4335, to enhance RF exposure public health and safety protections.⁸

Supporting the notion that selection of ANSI/IEEE is the only rational choice in this proceeding is the appended white paper, Preferability of ANSI/IEEE C95.1-1992: An Analysis Prepared on Behalf of the National Association of Broadcasters. This paper,

⁶ Indeed, even the Food and Drug Administration’s Center for Devices and Radiological Health, in its general endorsement of the ANSI/IEEE standard, noted that the current state of scientific knowledge regarding the relationship between RF exposure conditions and long-term biological effects was unclear and not sufficiently developed to base any alternatives to ANSI/IEEE.

⁷ See comments of the EPA Staff at 8. Note: These comments were generated by staff-level personnel. They were not developed through any formal agency review process. See also NCRP Report No. 86, Biological Effects and Exposure Criteria for Radio-frequency Electromagnetic Fields, National Council on Radiation Protection and Measurements, Bethesda, MD (1986).

⁸ In adopting the current RF radiation standards, the Commission stated that NEPA “requires us to consider the environmental impact of the operations and facilities we license or approve.” RF Radiation Proceeding, 100 FCC 2d 543, 552 (1985).

authored by Jules Cohen, P.E., provides a wealth of cogent and convincing arguments in support of ANSI/IEEE. We also refer the Commission to the April 21, 1994, Reply Comments of the IEEE/SCC28, Prepared by the Subcommittee Four Working Group on Interpretations and Endorsed by a Consensus of Subcommittee Four ("IEEE Reply Comments"). Here there is an effective rebuttal to the objections of EPA to FCC adoption of ANSI/IEEE C95.1-1992.

II. THE PUBLIC RECORD EVIDENCES OVERWHELMING SUPPORT FOR EXCLUSIVE ADOPTION OF THE ANSI/IEEE STANDARD, AND IN ITS ENTIRETY.

In responding to the Notice issued by the Commission in this proceeding, the vast majority of parties submitting comments has endorsed adoption of the proposed ANSI/IEEE standard in its entirety. Indeed, out of the approximately seventy comments filed, forty-seven parties explicitly endorsed the ANSI/IEEE standard,⁹ another ten

⁹ The following entities filed comments in ET Docket No. 93-62 recommending adoption of the proposed ANSI/IEEE C95.1-1992 Standard: Governmental Organizations: The Arizona Department of Public Safety; The U.S. Department of Defense; The Center for Devices and Radiological Health of the Food and Drug Administration; OSHA (see Reply Comments filed March 14, 1994.) Industry: TV and Radio Broadcasters and Equipment Manufacturers - The Association for Maximum Service TV and NBC, Inc.; CBS, Inc., Cap Cities/ABC, Inc., Greater Media, Inc., Tribune Co., Westinghouse Broadcasting; E.F. Johnson Co.; The Ericsson Corporation; National Public Radio. Telecommunication and PCS Organizations - Alcatel; American Personal Communications; AT&T; Apple Computer; Bell South Corporation; Ford Motor Company; GTE Service Corporation; McCaw Cellular Communications; Matsushita Communication Industrial Corporation of America/Panasonic; Motorola; Northern Telecom; Pacific Bell and Nevada Bell; PacTel Corporation; The Paging Network;

implicitly endorsed the standard through comments regarding implementation and measurement of exposure guidelines,¹⁰ and eight either offered support for the EPA's hybrid NCRP-ANSI/IEEE scheme or disfavored adoption of the ANSI/IEEE standard and/or urged modification to the current 1982 ANSI/IEEE standard.¹¹

A sampling of submissions by representatives from government, industry and academia to the Commission include the following support for the ANSI/IEEE standard:

Raytheon Company; Southwestern Bell Mobile Systems, Inc.; Sprint Cellular Company; TRW, Inc. *Engineering/Consulting Groups* - Cohen, Dippell & Everist, P.C.; Hammett & Edison; Hatfield & Dawson Consulting Engineers; Jules Cohen & Associates; Du Treil, Lundin & Rackley; Silliman & Silliman; Louis A. Williams & Associates. Academia/Non-profit Organizations: The Association of Federal Communications Consulting Engineers; The Cellular Telecommunications Industry Association; The Electromagnetic Energy Policy Alliance; IEEE COMAR; Prof. O.M.P. Gandhi; The Land Mobile Communications Council; The National Association of Broadcasters; the National Association of Business and Educational Radio, Inc. ; The National Volunteer Examiners; The Telecommunications Industry Association; Telocator; The United States Telephone Association; The Utilities Telecommunications Council.

¹⁰ The following entities filed comments in ET Docket No. 93-62 regarding implementation and measurement of the proposed ANSI/IEEE C95.1-1992 Standard: Industry Organizations: AMSC Subsidiary Corporation; Broadcast Signal Lab; Doty-Moore Tower Services; Glenayre Electronics; Maxwell Safety Products; Rolm. Academia/Non-Profit Organizations: The Electronic Industries Association (Consumer Electronics Group); IEEE Standards Coordinating Committee 28 - Non-ionizing Radiation; IEEE Standards Coordinating Subcommittee 4; Prof. Wayne Overbeck.

¹¹ The following entities filed comments in ET Docket No. 93-62 either favoring adoption of the EPA's proposed Hybrid Standard, disfavoring adoption of the ANSI/IEEE standard and/or modification to the current 1982 ANSI/IEEE standard: The American Radio Relay League, Inc.; The Committee on the Biological Effects of Radio Frequency Energy of the American Radio Relay League; The U.S. Environmental Protection Agency; The Federal Aviation Administration; David Smith Forsmann; Prof. Mark Hagmann; The Industrial Hygiene Institute; Linear Corporation; Wizard Broadcasting.

Government

The U.S. Department of Defense ("DOD")

Recommends that the FCC adopt the RF exposure guidelines as published and defined in ANSI/IEEE C95.1-1992. This position is supported not only by its comments in this proceeding but also by its issuance of official Instructions on the matter. This DOD document, Protection of DOD Personnel from Exposure to Radio Frequency Radiation and Military Exempt Lasers, is appended to NAB's filing today. This document underscores DOD's acceptance and use of ANSI/IEEE C95.1-1992.

The DOD applauds the FCC for its leadership in bringing their regulatory requirements into congruence with the most recently developed RF exposure guidelines.

U.S. Food and Drug Administration - Center for Devices and Radiological Health

Replacement of the ANSI/IEEE 1982 standard with the 1992 standard generally is appropriate and will provide a greater level of protection to the general public. Although the FDA did not agree with all parts of ANSI/IEEE C95.1-1992 (it stated concerns over the ANSI/IEEE "rationale statement" and "low power exemption"), FDA did, however, lend its general support to FCC adoption of the revised ANSI standard.

Industry

AT&T

Because the 1992 ANSI standard reflects the most recent and comprehensive review of relevant information and the broadest consensus of the engineering and scientific community, it should be adopted at this time.

The fact that the 1992 ANSI standard is already in the process of adoption by other expert bodies (including ACGIH and NATO) further supports its adoption by the Commission.

Association for Maximum Service Television

ANSI standards are the product of careful study, and reflect the considered judgment of experts from the private sector, the academic and the public sectors.

GTE

The ANSI/IEEE standard continues to be the most relevant and reliable guideline.

The standard is based on voluminous research, reflects long consideration by numerous experts, and employs conservative margins of error with significant safety factors.

McCaw Cellular

The 1992 ANSI standard setting process ensured representation of a broad range of scientific disciplines, and the standard incorporates all relevant scientific findings on RF bioeffects, addresses all environmentally significant aspects of RF exposure, incorporates substantial safety factors, and is consistent with other standard setting efforts.

Raytheon

The FCC should wholly adopt ANSI C95.1-1992 and reject proposals for partial use of alternative guidelines.

Raytheon believes that other standards, including international standards, will follow the ANSI standard as it represents the broadest consensus of the scientific community.

FCC adoption of the ANSI standard would strengthen the recognition and resolve in the scientific and technological communities to continue the support of the C95 committees to ensure the availability of future revisions of this standard as befits a "living standard."

Academia/Non-Profit Organizations

The Cellular Telecommunications Industry Association

CTIA supports the FCC's proposals because the newly adopted ANSI/IEEE standards are sound and scientifically-based, and provide the basis for the safe use of the vast array of radio products that are becoming commonplace.

The Electromagnetic Energy Policy Alliance (now the Electromagnetic Energy Association ("EEA"))

EEPA Supports adoption of the ANSI standard because (1) it is based on the most recent review of scientific literature; (2) the large and diverse membership of the IEEE committee reflects a more accurate consensus of the scientific community than smaller panels or selected panels; and (3) it surpasses other recommendations in addressing the practical problem of implementation.

IEEE - U.S. Activities Committee on Man and Radiation

The ANSI standard reflects a broad consensus of the scientific and engineering communities regarding maximum permissible exposures that will help to assure safe work places and living environments. That consensus is based on a large number of scientific papers published since the ANSI 1982 standard.

The Land Mobile Communications Council

The ANSI standard is the most comprehensive and reliable, and the FCC should adopt ANSI's findings.

To summarize, there is broad-based, overwhelming support for exclusive adoption of the ANSI/IEEE standard by the Commission.

III. THE COMMISSION SHOULD NOT BASE ITS REVISED RF EXPOSURE GUIDELINES ON THE EPA'S PROPOSED "HYBRID" STANDARD.

The vast majority of commentors in this proceeding agrees that the Commission should base its revised RF exposure guidelines exclusively on the ANSI/IEEE standard, not on the hybrid NCRP-ANSI/IEEE standard proposed by the EPA. Opposition to the EPA's proposed NCRP-ANSI/IEEE hybrid exposure guideline is premised on the grounds that the hybrid: (1) incorporates flawed definitions of exposure environments; (2) does not reflect the most current scientific information; and (3) does not represent an accurate or diverse consensus of the mainstream scientific community.

In its comments, the EPA staff asserts that, with the exception of body current requirements, the definitions of "controlled" and "uncontrolled" environments contained in the ANSI standard are too vague, discretionary, and not sufficiently protective.¹² EPA recommends categorization of exposure environments in terms of the populations to be protected and adoption of the "worker" and "general public" definitions contained in NCRP Report No. 86. However, NCRP provides no definitions of "worker" or "general public."

Opposition to this minority position is significant. There is vast consensus among commentors that the Commission should not adopt the NCRP definitions and should instead adopt the ANSI categorization of "controlled" and "uncontrolled" environments.

¹² See comments of the EPA at 3, 6.

Additional support from other standard-setting organizations for the ANSI guidelines approach is evidenced by the grouping of “controlled” and “uncontrolled” environments by both CENELEC and NATO in recent draft radiation protection proceedings.

Also existing is significant consensus regarding compliance methodologies under the new ANSI guidelines, which clearly favors the use of analytical tools vs. actual measurements. Due to the practical nature of the definitions of controlled and uncontrolled environments, ANSI/IEEE C95.1-1992 offers a realistic tool for assessing and conforming exposure conditions, and minimizing the impact and burden of compliance.¹³

A sampling of submissions by government, industry and academia reflects strong support for rejecting the hybrid approach.

¹³ There is considerable agreement between NCRP and ANSI in the body resonant frequency range from 30 kHz to 300 MHz; and therefore no clear advantage to NCRP. Over most of the applicable frequency range, the energy absorption allowed by ANSI is far less than that allowed by NCRP making the ANSI guidelines preferable. In the low frequency range, for example, the largest difference between ANSI and NCRP exposure recommendations surrounds the MPE for the magnetic field. The NCRP recommended capping the electric field strength at a limit equal to the magnetic field strength limit. However, since high magnetic field strengths are not associated with shock or burn, the ANSI standard-setting committee based the permissible magnetic field strength on limiting the whole body average SAR. Where discrepancies in the recommended standards exist, it is important to remember that ANSI is a more current document; was developed through a standard-setting process that was open; and used a far more comprehensive and current base of scientific literature.

Government

Arizona Department of Public Safety

Urges the FCC to stay with the ANSI/IEEE standard and not jump to other standards such as NCRP or IRPA.

The "controlled" classification is critical to State government agencies being able to operate their portable radio tower at 7 watts ERP below 450 MHz.

Industry

AT&T

Neither the NCRP or the International Radiation Protection Association ("IRPA") standard establishes that the Commission should not adopt the 1992 ANSI standard. The ANSI standard represents the work of a broad body of experts and reflects consideration of more recent data than is the case regarding the NCRP or IRPA recommendations.

**CBS, Inc., Cap Cities/ABC Inc., Greater Media, Inc.,
Tribune Broadcasting Co., and Westinghouse Broadcasting Co, Inc.**

The 1992 ANSI/IEEE standard, in adopting a two-tiered exposure regime, represents a desirable prophylactic measure to provide an extra margin of safety beyond what existing science supports.

Jules Cohen & Associates, P.C.

A further reason for favoring ANSI/IEEE over NCRP/IRPA is the process used in the development - only ANSI is an open process permitting the participation of anyone who might make a contribution to the effort. Participation in NCRP and IRPA are by invitation only.

E.F. Johnson Co.

The FCC should base its decisions on the scientific evidence available from ANSI and not bow to unproven assertions.

Raytheon

The proposal to use more conservative guidelines in the presence of “modulation” should be rejected. There was no scientific rationale for this practice in the referenced NCRP guidelines authored in 1986 by a small group. Since then, there has been no developing basis for such a proposal.

TRW

The company supports the use of the ANSI/IEEE guidelines over those issued by NCRP and IRPA.

Academia/Non-profit Organizations**IEEE Standards Coordinating Committee 28 - Non-ionizing Radiation Committee**

The intent of the definitions of “controlled” and “uncontrolled” environments should be clear to all. The standard-making process explicitly rejected “occupational” vs. “general population” as categories on the grounds that no reliable scientific data exist indicating that certain subgroups of the population are more at risk than others.

The important distinction is not the population type, but the nature of the exposure environment.

IEEE - U.S. Activities Committee on Man and Radiation

There exists no credible evidence of harm to human beings resulting from exposure at levels specified in the 1982 ANSI standards. The 1992 Standard is, to a considerable extent, consistent with the 1982 standard.

National Association of Business and Educational Radio, Inc.

NABER supports the new guidelines since all significant known effects are accounted for in the new guidelines and the process used by the ANSI/IEEE standard.

The Telecommunications Industry Association

Takes the position that alternate guidelines should be disregarded since the IEEE C95.1-1992 report intentionally omitted the modulation restriction suggested by NCRP.

As indicated above, the proposed ANSI standard, unlike the EPA-proposed standard, is preferable since it represents the most accurate and up-to-date scientific information available. In addition, unlike the NCRP committee, the committee which developed the ANSI standard was diverse and represented a wide cross section of industries and disciplines. For example, the ANSI committee comprised 120 members from over 14 separate scientific disciplines and employed an open process of participation. In contrast, the NCRP committee had only six members (in addition, the committee had five advisors and five consultants participating in its work) and limited participation to an invitation-only basis. The chairman and three other members of the NCRP committee were also members of Subcommittee IV of the IEEE SCC 28, as were five of the 10 additional NCRP advisors and consultants.

Importantly, the most prominent support for the hybrid NCRP-ANSI/IEEE EPA proposal comes from federal agencies (such as the FAA) which did not themselves conduct any independent studies or assessments of the proposal.¹⁴ This form of support contrasts with that of a number of commentators in favor of exclusive adoption of the ANSI

¹⁴ Also notable is the initial source and form of the EPA's hybrid proposal - introduced voluntarily by way of a staff person opinion by an individual within the agency. The proposal was not initiated by an agency-generated or mandated process.

standard, whose support was based upon practical assessment and implementation concerns.

Moreover, it should be noted that the EPA largely has abandoned its activity in this area. Its RF radiation program, which once involved dozens of employees in Washington and in the Research Triangle Park area of North Carolina, now is being given near-caretaker status – with only a skeletal staff now assigned to the entire issue.

IV. PURSUANT TO NEPA, THE FCC HAS A STATUTORY OBLIGATION TO ADOPT THE MOST CURRENT, SCIENTIFICALLY-BASED STANDARD FOR RF EXPOSURE.

The National Environmental Policy Act, supra note 4, provides specific supplemental authority to the Commission to evaluate the environmental effects of licensed transmitters and to impose conditions under which such transmitters may be operated. Correspondingly, the Commission has stated that in adopting current RF radiation standards NEPA “requires us to consider the environmental impact of the operations and facilities we license or approve.” RF Radiation Proceeding, 100 FCC 2d 543, 552 (1985). See also 47 C.F.R. Section 1.1305 of the Commission’s rules.

The supplemental authority conferred by NEPA exists within the context of, and consistent with, the FCC’s general delegation of authority under the Communications Act.¹⁵ Importantly, the Act states that “it shall be the policy of the United States to

¹⁵ The Communications Act specifies that the Commission’s purpose is “to make available, so far as possible, to all the people of the United States a rapid, efficient,

encourage the provision of new technologies and services to the public.” 47 U.S.C.

Section 157(a). As such, the Commission has an obligation to foster the development of new communications technologies through the development of rules and regulations which do not unduly burden, inhibit, or are inconsistent with its charter. Indeed, the Commission stated in the Notice in this proceeding that one of the principal issues to be addressed included “the impact on existing facilities and services” as a result of the revision of RF exposure guidelines.

The vast majority of submissions, as well as the wide scope of communications industries participating in the proceeding, evidence the importance of the Commission’s decision regarding RF exposure guidelines across the entire spectrum of communication industries. These include television, radio and satellite broadcasting, telecommunications, cellular communications, satellite and wireless communications, personal communication services, computing, and engineering.

The substantive impact of the guidelines on service providers, equipment manufacturers, employees, members of the public, and the on-going development of innovative communications systems, is quite significant. Numerous members of the participating industries have attested to the crucial need for and role of a scientifically sound, practical framework of RF exposure which can be implemented, complied with, and adapted over time.

ANSI/IEEE C95.1-1992 is the most scientifically up-to-date guideline available; has diverse, multiple-disciplinary support from experts in government, industry and

Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges.” 47 U.S.C. Section 151.

academia; and provides the Commission with a dynamic, broad-based guideline for protecting all people, in all environments, from harmful exposure to RF radiation.

V. THE COMMISSION SHOULD REJECT ALTERNATIVES BASED ON THE “PRUDENT AVOIDANCE” OR “ALARA” PRINCIPLES

As the Commission approaches its final decision in this proceeding, it is essential that the agency not adhere to the concept of “prudent avoidance,” nor adopt a standard based on the principle of “As Low as Reasonably Achievable” (“ALARA”). These concepts and principles are addressed in two documents appended to today’s NAB filing.

In the Jules Cohen white paper, there is included a brief but instructive discussion of how the ALARA concept is ill-suited for FCC action in this proceeding. Other appended materials, the EEA fact sheet “Prudent Avoidance” Policy: Based on Science or Fear?, and the EEA document “Prudent Avoidance”: The Abandonment of Science, explain how a policy of prudent avoidance is inconsistent with rational risk assessment and imposes extreme and unfounded restriction on the use of – in the instant example – electromagnetic energy and the devices which employ such energy.

We urge the Commission to review these documents as it develops a scientifically-based and practical solution to the issues and alternatives embodied in its RF radiation rulemaking proceeding.


VI. CONCLUSION

As set forth above, and as supported by the attached materials, the Commission should adopt the ANSI/IEEE C95.1-1992 standard in its entirety -- and exclusively. This agency action would be based on the almost universal support for the adoption of the revised ANSI/IEEE standard, the inherently flexible, most current scientifically-based framework for limiting electromagnetic energy exposure.

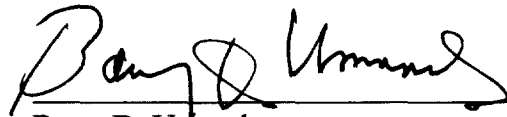
Exclusive adoption of the ANSI/IEEE standard would be consistent with the authority granted to the Commission pursuant to the Communications Act and NEPA, would create safe RF exposure guidelines which could be readily implemented and complied with and would encourage the continued development and public availability of innovative communications systems across a wide spectrum of industries and services.

Respectfully submitted,

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February 23, 1996

CERTIFICATE OF SERVICE

I, Paul Stilp, an employee of the National Association of Broadcasters, hereby certify that a copy of the foregoing "Supplement to Reply Comments of The National Association of Broadcasters" was served by hand, the 23rd day of February, 1996, upon the following:

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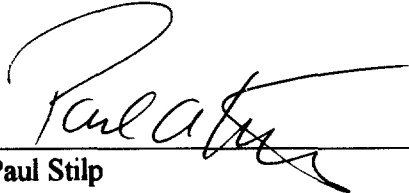
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APPENDIX A

PREFERABILITY OF ANSI/IEEE C95.1-1992:
AN ANALYSIS PREPARED ON BEHALF OF
THE NATIONAL ASSOCIATION OF BROADCASTERS

JULES COHEN, P.E.

**PREFERABILITY OF ANSI/IEEE C95.1-1992
AN ANALYSIS PREPARED ON BEHALF OF
THE NATIONAL ASSOCIATION OF BROADCASTERS**

At the request of the National Association of Broadcasters, this analysis has been prepared of the options available to the Federal Communications Commission in arriving at a final decision in the matter of *Guidelines for Evaluating the Environmental Effects of Radiofrequency Radiation*, ET Docket No. 93 - 62. The clear conclusion of the analysis, for reasons set forth below, is that ANSI/IEEE (American National Standards Institute/Institute of Electrical and Electronics Engineers) C95.1-1992¹ should be adopted in its entirety as the guideline for determining the permissible limits for exposure to radio-frequency fields.

In comments filed in response to the Commission's *Notice of Proposed Rule Making* in ET Docket No. 93 - 62, suggestions were made, principally in a communication from the staff of the Environmental Protection Agency (EPA), that guidelines should be based on exposure criteria set forth by the National Council on Radiation Protection and Measurements (NCRP)² or a hybrid of the ANSI/IEEE and NCRP criteria.

I. The Preferability of Standards as Living Documents

Among the several reasons why ANSI/IEEE is superior to NCRP (or a hybrid) is in

¹ *ANSI/IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz*, ANSI/IEEE C95.1-1992.

² *Biological Effects and Exposure Criteria for Radiofrequency Electromagnetic Fields*, NCRP Report No. 86, Issued April 2, 1986, National Council on Radiation Protection and Measurements, 7910 Woodmont Avenue, Bethesda, MD 20814.